

IV. *New species of moths from Southern India.* By  
Colonel CHARLES SWINHOE, F.L.S., F.Z.S., &c.

[Read November 5th, 1890.]

PLATE VIII.

BOMBYCES.

SYNTOMIDÆ.

1. *Tascia gana*, n. sp. (Pl. VIII., fig. 12).

♂. Antennæ, head, eyes, thorax, and both wings, black; antennæ bipectinated, branches below the shaft short and thick; top of head thickly covered with glistening blue-green scales, a few also on the shaft of the antennæ, a thin crimson line behind the head, followed by two thin lines of blue-green scales, a few similar scales scattered thinly over the thorax and fore wings, thickest on the costal and outer portions. Fore wing fairly clothed, thinly clothed within the cell, and with a semidiaphanous suffused streak in the basal half of the interspace below the cell; a large white semidiaphanous spot at the end of the cell, like a half-moon, with the circle inwards and the ends rounded. Hind wings paler, dull black, semidiaphanous, darkest on the costal border; abdomen with a blackish brown band at the base, followed by a broader golden band, a blackish brown band, and a golden band with brown anal tip, the last three bands of equal width; a brilliant band of crimson hairs on each side of the abdomen, from the top of the first golden band to the tip. Under side dull pale blackish brown, pectus crimson, legs blackish brown. Body as above, but with the golden bands reddish. Expanse of wings, 1 in.

Ganjam, October, 1887 (*Hampson*).

Easily distinguishable from all other Indian species of this genus by its beautifully coloured and banded abdomen.

2. *Syntomis magna*, n. sp. (Pl. VIII., fig. 1).

♂. Above and below of a uniform deep black; shaft of the antennæ broadly pure white near the tips. Fore wing with three

bands of diaphanous spots; 1st subbasal, a single small spot; 2nd medial, composed of two spots divided by the median vein, the lower one the larger and rounded below; 3rd discal, composed of three longitudinal spots of equal size, with rounded ends. Hind wing with basal and discal hyaline bands of spots divided into three portions by the veins, the lowest much the smallest. Abdomen tinged with green, with basal and medial orange bands, the former only on the upper side, the latter encircling the abdomen. Expanse of wings,  $1\frac{7}{10}$  in.

North Kanara, August, 1886 (*Wise*).

Allied to nothing I know of.

### 3. *Syntomis lydia*, n. sp. (Pl. VIII., fig. 7).

♂ ♀. Antennæ pectinated with very short hairs in the ♂, simple in the ♀; antennæ, head, and body blackish brown; tips of the antennæ in the female white. Abdomen with a basal ochreous band above. Wings nearly all hyaline. Fore wing with the base and the costal band limited by the subcostal vein, brown; veins and markings of same colour, a patch at end of cell, a thickening where the 1st median branch is emitted, a broadish apical patch, and another towards the hinder margin, connected by a marginal line. Hind wing with the costa brown, and with an apical patch. Below, body and legs brown; abdomen of the female yellowish towards the anal portion. Expanse of wings, ♂  $\frac{8}{10}$ , ♀  $\frac{9}{10}$  in.

Nilgiri Hills, 3500 ft., October, 1887 (*Hampson*).

Allied to *S. aperiens*, Walker, which also occurs in the Nilgiris; is more hyaline, the bands smaller, and there is no connecting band between the patch at the end of the cell and the apical patch on fore wings.

### 4. *Syntomis mota*, n. sp. (Pl. VIII., fig. 2).

♀. Antennæ simple; antennæ, head, and body black, a white space on antennæ towards the tips, collar golden yellow, and two bands of same colour on abdomen, basal and post-medial (on the fifth segment). Wings mostly hyaline; veins and patches black, base black, costal line limited by subcostal vein, and also the hinder border black; median vein and first median branch thick, thickest where the branch is emitted; a bottle-shaped patch at the end of the cell, with its neck running half-way up the 2nd discocellular interspace; an apical patch and a very large patch, square on its inner side, near the hinder angle, connected with the bottle-

shaped patch by the thickened veins, and to the apical patch by the black cilia, fining down at the angle, and running into the black hinder margin. Hind wing with the outer half black, and with a thick costal black margin to the hyaline portion, which is divided into two by the prominent black median vein. Under side: body and legs black; thorax with two large golden yellow spots on each side; abdomen with the lower golden band only; hind legs with whitish on the tarsi. Expanse of wings,  $1\frac{1}{2}$  in.

Nilgiri Hills, 3500 ft., August, 1887 (*Hampson*).

Allied to *S. libera*, Walker, from Burma, differs chiefly in having the hyaline portion of the hind wings divided into two portions only, whereas in *S. libera* it is divided into three; and it is a much larger insect.

#### LITHOSIIDÆ.

##### 5. *Barsine chromatica*, n. sp.

♂ ♀. Antennæ, body, and fore wings chrome-yellow, eyes black, thorax with a black spot on each shoulder, and two central. Fore wing with a black basal spot on costa, a subbasal black spot in the wing, a blackish brown spot at the end of the cell, and a broad band of the same colour, pale and suffused, running throughout the wing, formed by two transverse outwardly curved bands, one before the middle and the other discal, joined in the centre, and with the outer band thinning out some thick streaks towards the outer margin. Hind wing pale chrome-yellow, semidiaphanous, apex with a pale brownish patch. Abdomen with thick brownish hairs covering the lower half; tips yellow. Under side as above, but paler and less distinct; legs chrome-yellow. Expanse of wings,  $1\frac{2}{10}$ — $1\frac{3}{10}$  in.

Nilgiri Hills (*Lindsay*).

Allied to *B. rubricosa*, Moore, which I have also from the same locality, is larger, yellower, and differs in the pattern, having a spot at end of cell and no central band.

##### 6. *Bizone linatula*, n. sp.

♀. Antennæ reddish; head, body, and fore wings pure white; thorax with red bands in front, across the middle, and at the base; abdomen with the hinder half reddish. Fore wing with four transverse red bands, somewhat as in *B. subornata*; subbasal, ante-medial, post-medial, and submarginal quite close to the margin, and the hinder part touching it, but not quite reaching the

angle; 2nd band inclining inversely and almost straight, 3rd nearly upright and angled sharply inwards above, 2nd lined with black on its inner side, 3rd lined with black on its outer side; three blackish brown spots inside end of cell, one in the median vein, and the other in a line above it. Hind wing pale reddish, with the costal third pure white; cilia of both wings white. Under side white; wings with the markings showing through; legs white, tarsi banded with pale pinkish. Expanse of wings,  $1\frac{4}{10}$  in.

Khandalla and Matheran, October, 1886.

Allied to *B. subornata*, Walker; differs chiefly in the straightness and position of its 2nd band, and in the black edges to its 2nd and 3rd bands. Mr. Elwes (P. Z. S., 1890, p. 396) incorrectly refers this insect to *B. subornata*, but the prominent black edges to the bands clearly separate it from that species, this being a particularly distinctive specific character in the genus. I have one male and three females of *B. subornata* from the Andaman Islands, the females of which are identical with Walker's type, which is also a female; the male has the costal fold on fore wings well-marked; like the female it has three spots between the 2nd and 3rd bands, the upper two being covered by the heavy fold, and it has red hind wings.

#### 7. *Bizone peregrina*.

*Bizone peregrina*, Walker, ii., 551 (1854); Elwes, P. Z. S., 1890, p. 390, No. 2.

North Kanara, July, 1886; Ceylon.

Mr. Elwes is correct in his note at top of p. 391; the insect he refers to as *B. peregrina*, Walker, is *B. puella*, Drury, and *vice versá*, and Mr. Moore, in his collection, has the two names transposed. *B. puella* is an insect never common, but found in many parts of India north and south; I have a pair from Solon, near Simla, taken by the late Captain Reed on sugar, and specimens from Bombay, Khandalla, Thanna, and Mahableshwur; and there are in my collection three males and one female of *B. peregrina* from Ceylon, received from Mr. Mackwood, and a male and female from North Kanara, received from Mr. Wise. The two species are very distinct; Walker's Ceylon specimen is considered as his type of *B. peregrina*, his description is, however, a mixture of several species. *B. peregrina*, according to the Ceylon



type, has a male with the red bands on fore wing nearly straight, as in the female, costal fold distinct, and on the hind wing, just below the middle of the costa, is a large patch of blackish brown scales; the male, however, of the female insect named by Drury as *puella* has, like the female, bands rather deeply elbowed inwards, the 2nd band in the middle and the 3rd band near the hinder margin, the costal fold is very slight, and there is no patch of scales on the hind wing. All the males of *peregrina* have their hind wings nearly pure white, with pinkish suffusion on the borders; and the two central red bands on fore wings of both species are edged with black in both sexes, the 2nd band inwardly and the 3rd band outwardly.

8. *Raselia culaca*, n. sp. (Pl. VIII., fig. 9).

♂. Antennæ grey; top of head and collar and anal tuft of abdomen pure white; thorax and fore wings greyish white; abdomen dark grey. Fore wing with a black costal subbasal spot, and three thin transverse zigzag blackish bands; ante-medial, medial, and post-medial, the two latter nearly meeting on the hinder margin; an indistinct incomplete submarginal grey festoon; this and all the bands more or less outwardly margined with white; marginal line grey. Hind wing whitish, faintly clouded with grey. Under side almost uniformly dark grey. Expanse of wings,  $\frac{7}{16}$  in.

Nilgiri Hills (*Hampson*).

Allied to *R. (Nola) cingalesa*, Moore, from Ceylon, but can easily be distinguished by the difference in the bands on fore wings.

ARCTIIDÆ.

9. *Alpenus eximia*, n. sp. (Pl. VIII., fig. 8).

Antennæ and tip of palpi blackish; head, body, and fore wings bright ochreous red, hind wings paler, markings pale black, body unmarked. Fore wings with two or three short longitudinal streaks at the base, followed by a subbasal narrow band, slightly outcurved, and running on to the base along the costa, a medial broad band which bifurcates on to the costa, the outer branch angled outwardly close to a submarginal band of elongated spots. Hind wing with a spot at upper end of cell, and submarginal spots, which become minute in the middle, and are largest and suffused into a patch near the anal angle; the bands in the fore wing are more or less composed of longitudinal spots and streaks suffused

together. Under side: body, legs, and wings same colour as the hind wings above; body and legs without markings; wings marked as above. Expanse of wings,  $1\frac{1}{10}$  in.

North Kanara, September, 1887 (*Wise*).

Its peculiar red colour at once distinguishes it from all other species of Indian *alpenus*.

#### LIPARIDÆ.

##### 10. *Artaxa pelona*, n. sp.

♂. Antennæ, body, hind wings, legs, and whole surface below, pale straw-colour. Fore wings above bright cinnamon-yellow; three brown submarginal spots, 1st at apex, 2nd a little below it, and the 3rd near the hinder angle, and two transverse bands of blackish brown irrorations, ante-medial and post-medial, 1st slightly curved outwardly, 2nd recurved, throwing out a short band from its middle towards the outer margin; one specimen has nearly all the markings obsolete. Under side without any markings. Expanse of wings,  $1\frac{2}{10}$  in.

Nilgiri Hills (*Lindsay*).

Allied to *A. fraterna*, Moore, from Ceylon, but is much larger and quite differently marked on the fore wings.

##### 11. *Artaxa rhoda*, n. sp.

♂. Antennæ, body, and wings of a rich warm chrome-yellow. Hind wings slightly paler than the fore wings. Fore wing with a brown spot at the end of the cell; a straight macular band of brown irrorations from the centre of the hinder margin, towards the apex, which it does not reach; a short straight similarly composed thin band close inside, not macular, running from the basal third towards the spot at the end of the cell. Under side: body, wings, and legs of a uniform pale bright chrome-yellow, unmarked. Expanse of wings  $1\frac{3}{10}$  in.

North Kanara, August, 1887 (*Wise*).

Allied to *A. discinota*, Moore, from the Andamans; differs in its straight bands, the outer band in *discinota* being recurved and crossed by pale veins, and in the absence of all markings below.

##### 12. *Euproctis illanta*, n. sp.

♂ ♀. Above and below of a uniform cream-colour. Antennæ of the male with the shaft and plumes ochreous tinted. Fore

and hind wings uniformly coloured and clothed; the entire surface of both wings and body above and below without any markings. Expanse of wings, ♂  $1\frac{1}{10}$ , ♀  $1\frac{4}{10}$  in.

Pona, September, 1888; Alibagh, near Bombay, March, 1888.

Allied to *E. postica*, Walker, which has, however, a black abdomen and white wings.

#### NOTODONTIDÆ.

##### DICRANURINÆ.

#### 13. *Harpyia wisei*, n. sp. (Pl. VIII., fig. 3).

♀. Shaft of antennæ, front and top of head, body and fore wings silvery white; plumes of antennæ and all markings black; a line across at the back of the head; thorax with four cross macular lines; abdomen with broad bands on the upper half of each segment, and black spots on each side, pale at the base, and gradually darkening downwards; anal segment with a ring in the centre, enclosing a spot, and edged round with a black line. Fore wing with a mark at the base, and many transverse zigzag lines, and with two large marks like lunules at the end of cell, one inside and the other outside; first two lines near the base are broken, the second two almost regularly dentated, and enclose a pale black band; the remainder are dentated outwardly, forming lunules in the interspaces; costa marked with black, the largest black mark being near the apex, and large black spots on the outer margin in the interspaces. Hind wing pale black, with a short whitish fascia from the anal angle, and blackish spots on the outer margin in the interspaces. Under side: face and pectus black, body white, some black spots on the lower segments, and a black band across the last one; legs white, with black bands; both wings whitish, with blackish suffusions on the outer half; black marks on the costa and spots on the outer margin as above. Expanse of wings,  $3\frac{1}{2}$  in.

N. Kanara, September, 1887 (*Wise*).

Allied to *H. litura*, Walker; has more numerous zigzag lines across fore wings, is much larger, and the central fascia is broader and more regularly dentated.

#### LASIOCAMPIDÆ.

#### 14. *Eupterote hirsuta*, n. sp.

♂. Antennæ with the shaft brown, plumes reddish; thorax and abdomen of a uniform reddish brown; top of head and collar

ochreous; the ground colour of both wings of a bright ochreous yellow, thickly suffused with reddish brown, with the ground colour showing through in places, especially at the outer marginal portions beyond the discal line, which is duplex, runs across both wings, and on both wings curves inwardly on the lower, and outwardly on the upper portions, curving in on to the costa; the thorax is covered with brown hairs of an unusual thickness and length, and so is the basal portion of both wings, quite hiding the ground colour, and the usual transverse lunular lines, which are only visible here and there; the fore wing has some yellowish outwardly angular spots in the interspaces against the outside of the duplex line, the second from the hinder angle enclosing a large round black spot, and the third a pale brown one; on the hind wing is an outwardly dentated brown line similarly placed, with an indistinct spot near the angle. Under side: face and pectus dark brown; body and legs reddish brown; wings bright ochreous yellow; discal line on both wings with the black spot on fore wing and the same on hind wing plainer than above; a lunular line beyond, and lunular lines on the outer half of both wings inside the discal line, four on the fore wing and three on the hind wing. Expanse of wings, 4 in.

Khandalla, September, 1888 (*Hewett*).

Allied to *E. undata*, Blanchard, which also occurs at Khandalla; and this insect, of which I have only a single perfect specimen, may be only a sport of that species; but the curious curves of the discal band and the unusual colour of the wings make it look distinct, and certainly worth describing.

#### 15. *Nisaga teta*, n. sp.

Wings longer and proportionately narrower than in *N. simplex*, Walker, the type of the genus; costa of fore wing nearly straight, except at the immediate base, where it is slightly arched. Wings of a bright yellowish fawn-colour, yellower than in *N. simplex*, and more glistening; hind wing darker than the fore wing, more ochreous; both wings above and below very uniform in their coloration, and absolutely without markings of any kind; antennæ with the plume brownish; abdomen above and below and legs tinged with ochreous brown. Expanse of wings,  $2\frac{1}{10}$ — $2\frac{2}{10}$  in.

Kolar, Mysore, October, 1888 (*Hampson*).

Allied to *N. simplex*, and somewhat of the appearance of the variety *N. modesta*, Moore, but of a different shape

and character, and is quite distinct; in this genus both the sexes are alike in having heavily-plumed antennæ.

### 16. *Messata acinia*, n. sp.

♂. Of a uniform pale yellow, tinged with ochreous fawn-colour. Fore wing with two brown longitudinal bands, which extend from the apex to the hinder margin, the 1st at one-third, and the 2nd at two-thirds, and are joined together on the border. Hind wing and under side of both wings unmarked; plumes of antennæ brownish; abdomen and legs reddish brown.

♀. Of a brighter yellow colour; bands paler and somewhat indistinct; other characters same as in the male. Expanse of wings, ♂ ♀  $2\frac{6}{10}$ — $2\frac{7}{10}$  in.

North Kanara, July and August, 1886 (*Wise*); Khandalla, September, 1888 (*Hewett*).

Allied to *M. flavida*, Moore, Trans. Ent. Soc. Lond., 1884, p. 372, from the Nilgiri Hills; differs chiefly in having two bands instead of three, and a brown body instead of a yellow one.

## GEOMETRITES.

### EUSCHEMIDÆ.

### 17. *Euschema nelera*, n. sp.

♂ ♀. Antennæ and palpi black; both wings of a uniform pale purplish colour, bands and spots purplish black; wings thinly clothed; space between the antennæ black, a yellow band behind it; thorax pale purplish, suffused with yellow; three bands across the thorax, in front, behind, and in the middle, corresponding with similar bands on the wings; abdomen yellowish, with bands on the segments, bright chrome-yellow tips, and in the male with anal tufts of that colour. Fore wing with three longitudinal straight bands on the basal third, the lowest the longest, and commencing across the base of the hind wing; the band on the costa elbowed acutely inwards, and terminating near the end of the lowest band; a large spot at the end of the cell, and extending to the costa; costal line between this and the basal band also purplish black; a thick distorted discal band, which bends inwards below the spot, and a deep marginal band, which fines down to the hinder angle; the large spot and two outer bands really cover the outer third of the wing, leaving two pale purplish bands of spots. Hind wing with a large spot at end of cell, which runs inwards, paler in a short suffused band towards the abdominal margin; a discal



recurved band somewhat near the margin, and dentated outwardly on the veins in its centre; a submarginal row of spots, large at the apex, and touching the margin, becoming smaller towards the anal angle; four large bright ochreous marginal spots towards the anal angle in the male only. Under side: body yellow; legs yellow below, bluish grey above; abdomen of the female with segmental bands. Expanse of wings, ♂ ♀  $2\frac{9}{10}$ — $3\frac{1}{10}$  in.

Matheran, October, 1886; Khandalla, December, 1882.

Allied to *E. transversa*, Walker, from Ceylon, which I have also got from North Kanara, somewhat similarly marked; but in that species the bands are thicker and closer together, and the large bright chrome-yellow spots on the hind wing are absent. This insect was wrongly identified by me as *E. malayana*, Guér., in P. Z. S., 1885, p. 864. It comes out in a regular swarm on the top of the Matheran and Khandalla Mountains for about a week every cold season, and flies by day and night.

### 18. *Euschema percota*, n. sp.

♂ ♀. Front of head and stripe behind the head yellow; palpi, antennæ, and all stripes and spots, purplish black; thorax and wings pale purplish; wings thinly clothed; thorax suffused with yellow in places; abdomen yellowish, with segmental bands; thorax with three bands across, corresponding to the three basal bands on the fore wings, which are as follows: 1st on costa, short, and sometimes broken into spots; 2nd about the same length; 3rd crossing the base of hind wing, and curving upwards across the 2nd band, and inwards on to the costa near the 1st band; two large spots below the cell, in the interspace, one above the other; apical third purplish black, showing a large spot of that colour at the end of the cell; beyond this is a pale purplish spot, and sometimes another smaller and indistinct spot again beyond; a pale streak also at the hinder angle. Hind wing marked like the hind wing of *E. nelera*, the spot at the end of the cell round, and a smaller spot between that and the abdominal margin; the spots on the outer margin also more round. Under side: body yellow; abdomen of the female with segmental bands; wings paler than above, spots prominent; outer purplish black colour of fore wings confined to the apex, some spots on the border, and a distorted macular band in the disc; hind wing as above, but with the discal band and marginal spots finer and paler. Expanse of wings, ♂  $3\frac{2}{10}$ — $3\frac{5}{10}$ , ♀  $3\frac{6}{10}$ —4 in.

Matheran, October and December, 1886; Khandalla, October, 1887; Calicut, Tavandrum (*Hampson*); Lanaoli, May, 1888.

Differs from *E. nelera* in its black apical third of fore wings, and in the different arrangement of the basal markings; also in the absence of the chrome-yellow spots on the hind wings of the male: is allied to *E. palmyra*, Stoll, for which I mistook it (*P. Z. S.*, 1885, p. 864), but is quite distinct, *E. palmyra* being closely allied to *E. transversa*, Walker. This insect also appears in swarms in the cold weather, and, like the rest of the genus, flies by day; one or two are occasionally also taken in the summer. There are specimens of it unnamed in the B. M., and in Mr. Moore's museum.

#### ZERENIIDÆ.

##### 19. *Abraxas germana*, n. sp.

♂ ♀. Head and body ochreous, spotted with blackish brown; abdomen with three rows of spots; wings of a dull pale ochreous; hind wings paler and whiter; both wings covered with blackish brown irrorations, coarse and dark on fore wings, pale and minute on hind wings, especially towards the base; both wings crossed by a discal line or thin band, including brown spots on the veins in the hind wing, where the band is well covered outwardly above the middle, and composed of densely patched irrorations on the fore wing; but in the female it is merely an ordinary band of brownish colour; a brown spot at end of cell on hind wings, and a black marginal line interrupted by the veins on both wings in the male only; the female is otherwise the same as the male, but is more whitish in colour, nearly uniform on both wings; antennæ and legs brown. Below: body yellow, spotted with brown; wings as above, but in the males with the bands and spots very distinct; the irrorations suffused with longitudinal streaks nearly covering the wing. Expanse of wings. ♂ ♀ 2 in.

Nilgiri Hills (*Lindsay*).

Closely allied to *A. luteolaria*, Swinh., but is not so bright in coloration.

*A. luteolaria* has two bands across both wings, of a different character on the fore wings, and with the outer band nearer to the marginal border.

## GEOMETRIDÆ.

20. *Thalassodes melica*, n. sp.

♂. Thorax and wings of a uniform sea-green; both wings crossed by ante-medial and discal faint whitish lines, nearly straight on fore wings, slightly curving outwards, more curved on the hind wings, lined inwardly with a slightly darker shade of green, the inner line of hind wings hardly visible; both wings irrorated with a few silvery speckles, and with the cilia silvery white. Hind wings produced below the middle into an acute angle; antennæ, abdomen, body below, and legs, yellowish; wings below of a uniform greyish white, unmarked. Expanse of wings,  $\frac{8}{10}$  in.

Poona, November, 1887.

Allied to *T. graminea*, Hampson; differs in the more rounded apex of fore wings, and the straightness of the transverse lines on both wings, being in no way sinuous.

## FIDONIDÆ.

21. *Zomia miscella*, n. sp.

♂ ♀. Body and fore wings of various shades of colour, from brownish green to pale ochreous brown; markings very much as in *Z. incitata*, Walker; the outer band more bent and produced outwardly in the middle, nearly touching the margin. Hind wings rich ochreous; the brown mark at the anal angle in the dark specimens continued up the abdominal border in a uniform shade of colour to the base, usually filling up the whole space behind the median vein; a brown spot at the end of the cell. Below: both wings coloured like the hind wings above; a brown spot at the end of each cell; the costa and outer portion of fore wings, and the whole surface of the hind wings, spotted with brown dots, suffused on the outer portions of the fore wings in some specimens; body and legs ochreous; antennæ coloured like the fore wings and bipectinated with very short bristles. Expanse of wings,  $1\frac{5}{10}$ — $1\frac{8}{10}$  in.

Khandalla, October, 1886; Nilgiri Hills, 6000 ft. (*Hampson*).

Is evidently the southern form of *Z. incitata*, Walker, from Sikkim; the short plume of the antennæ, however, would alone make it quite a distinct species, the plume of the male being less than half the depth of the Sikkim insect, and not so deep as the plume of the female of

that species; it differs chiefly also in the spots at the end of the cell of the hind wings above, and in all the wings below, and in the other spots and markings below, *Z. incitata* having no spot above, and is immaculate below, except for two slight reddish marks at the end of the cells.

22. *Hypochrosis intexta*, n. sp. (Pl. VIII., fig. 11).

♂. Antennæ blackish brown, plumes white at their base; top of head whitish; body and wings of a uniform brownish grey; wings covered with black irrorations, and with some pale chocolate-brown outwardly oblique bands, fore wings with two before the middle, the 2nd terminating in a square black patch on the costa; two bands beyond the middle, one discal and outwardly dentated in the middle with two teeth, the other marginal, the latter inwardly sinuous, and with a black mark near the hinder angle; a central black sinuous line from a smaller black patch on the costa near the apex, terminating in the middle of the wing, and two pale brown marks at the base. Hind wing with traces of the 2nd band near its base, and with the discal and marginal bands complete, the former with outer border, and the latter with inner border, dentated and edged with dark brown; a black central slightly sinuous line from the abdominal margin near the middle, towards the costal third, which it does not reach; costal portion whitish. Under side: body, legs, and wings pale chocolate-brown, paler than above; no markings except the two brown spots on the costa of the fore wings, which are faintly visible. Expanse of wings,  $1\frac{1}{10}$  in.

N. Kanara (*Wise*).

I know of no species to which this insect has any near resemblance in its markings.

## NOCTUES.

### LEUCANIIDÆ.

23. *Axylia dispalata*, n. sp.

♂. Antennæ, palpi, and head brown; thorax, abdomen, and fore wings reddish grey; thorax and fore wings suffused with brown. Fore wings with the orbicular and reniform prominent, the former round and small, the latter much larger and more or less ear-shaped, generally pale, sometimes brown, the whole wing more or less dotted and streaked with black and brown, forming a fascia extending through the cell, and from the reniform, in a line to the outer margin, most of the space above is dark brown, and in

some specimens there are two transverse fasciæ before and beyond the middle; a duplex transverse discal row of black points, some pale spots on the costa on the apical half, marginal black points, and pale cilia marked with brown. Hind wing nearly pure white, unmarked. Under side: body and legs brownish; tarsi with pale bands.

♀. Like the male, but paler; the head and body are reddish grey, and the brown and black markings on fore wings are thinner, leaving the lower portions paler. Expanse of wings, 1 in.

Poona, September and October, 1882, August, 1887; Khandalla, October, 1886—87.

Allied to *A. renalis*, Moore, from Kashmir, Solon, and the Punjaub, which it superficially resembles; it is, however, smaller, differently coloured, the wings are narrower and shorter, apex rounded, and the markings, though somewhat similar, are of a different character, and the legs are differently coloured and marked.

#### HELIOTHIDÆ.

##### 24. *Dorika curta*, n. sp.

♂ ♀. Antennæ, head, and thorax brown; abdomen and fore wings yellowish fawn-colour; hind wings white; fore wings with some darker longitudinal shades; a broad medial longitudinal blackish band from the base to near the outer margin; a short subapical blackish streak, black marginal points, some indications of a transverse row of discal blackish points, and some brownish marks on the cilia. Hind wings with minute black marginal points, otherwise unmarked. Under side: body and legs yellowish fawn-colour; wings whitish; fore wings with medial and costal blackish longitudinal fasciæ; both wings with black marginal points. Expanse of wings, 1—1 $\frac{2}{10}$  in.

Poona, September, 1888.

Allied to *D. auriola*, Walker; is smaller, is not gilded like that species, differs in the shape of the stripes, and has the fore wings shorter and more square.

##### 25. *Curubasa depicta*, n. sp. (Pl. VIII., fig. 4).

♀. Antennæ pinkish, palpi ochreous, thorax and fore wings bright silvery cream-colour; head and fore part of thorax pinkish lake, some marks of the same colour on the rest of the thorax; abdomen ochreous brown (being a female the colour here has probably changed somewhat since life). Fore wing with two



broad pinkish lake longitudinal bands with even edges, filling up the entire costal and hinder marginal spaces; cilia with some marks of the same colour. Hind wings greyish white, glistening, unmarked. Under side: body and legs greyish ochreous; abdomen with whitish segmental bands; wings greyish white, with some whiter longitudinal streaks. Expanse of wings,  $1\frac{6}{10}$  in.

Khandalla, September, 1888.

Allied to *C. lanceolata*, Walker, xxxiii., 767; differs in the formation of the stripes, and in its much larger size, that species having the fore wings rose-coloured, with a central silvery stripe. I have a series of both sexes. Of this new species I have only one perfect female specimen, but it is such a beautiful insect, I am tempted to name and describe it.

### 26. *Masalia dora*, n. sp.

♂. Antennæ, palpi, and head pale fawn-colour; thorax and fore wings dark ochreous fawn-colour. Fore wings irrorated with black atoms, which in places are clustered together into indistinct longitudinal streaks; a brownish patch near the apex, and a row of diffuse indistinct submarginal transverse spots. Hind wings and abdomen silvery white, tinged with fawn-colour, unmarked; anal tuft reddish fawn-colour. Under side pale luteous fawn-colour; fore wing inwardly suffused with brown.

♀. Pale yellowish, shining; fore wing irrorated with reddish atoms, with longitudinal reddish streaks; hind wings, abdomen, and the entire under surface paler, and of a uniform pale shining greyish yellow. Expanse of wings, ♂ 1, ♀  $1\frac{2}{10}$  in.

Khandalla, October, 1886.

Allied to *M. irrorata*, Moore, but from which it widely differs in its coloration, in its brown cilia, and in the disposition and nature of the discal spots.

## ACONTIIDÆ.

### 27. *Marimatha freda*, n. sp.

♂. Luteous fawn-colour; antennæ, palpi, head, fore part of thorax, and anal tuft ochreous. Fore wing with the costa brown, this colour broader and darker on the basal half; a duplex sinuous black discal line, chalybeous whitish in its interior, bending inwards above on to the costa, and throwing out a straight brown shade to the apex, with a brownish suffusion on the marginal space below it; marginal line blackish brown; cilia brownish, with a

pale basal line. Hind wing slightly paler than the fore wing, and suffused with grey. Under side luteous fawn-colour; wings suffused with brown. Expanse of wings,  $\frac{9}{10}$  in.

Nilgiri Hills, two males (*Grant*).

Not allied to any Indian species known to me, but somewhat resembles *M. duplicalis*, Walker, xxxiv., p. 1205, from Sierra Leone.

### 28. *Tarache melanchlæna*, n. sp.

♂ ♀. Antennæ, palpi, head, and thorax blackish brown; wings pinkish grey, suffused almost all over with blackish brown. Fore wing with a broad central blackish brown band, angled outwardly just above the centre; basal and outer parts also dark blackish brown, leaving pale bands, showing the ground colour of the wing on each side of the central band. Hind wings and abdomen suffused all over with a paler brown colour; marginal line of both wings black; cilia brown, with a pale basal line. Under side coloured, suffused like the hind wings above. Expanse of wings,  $\frac{6}{10}$ — $\frac{7}{10}$  in.

North Kanara, June, 1887 (*Wise*).

Allied to *T. excisa*, Walker, but is altogether a blacker insect, without any silvery bands as in that species.

## ANTHOPHILIDÆ.

### 29. *Hyela senna*, n. sp. (Pl. VIII., fig. 14).

Antennæ, palpi, body, and fore wings greyish yellow. Fore wing with a broad blackish brown longitudinal band, occupying nearly half the lower portion of the wing up to the outer third, above which it curves deeply on its inner margin, leaving an angle at the basal third, and from the outer third it runs straight to the apex, towards which it becomes attenuated; this band is edged with whitish yellow, and there are a number of brownish diffuse longitudinal marks all over the yellow portion of the wing. Hind wings brown. Under side of a uniform dirty grey. Expanse of wings,  $6\frac{1}{2}$ -10th in.

Poona, November, 1887.

Is a much smaller insect than *H. latiritta*, and the brown band is differently disposed.

## POAPHILIDÆ.

30. *Poaphila erica*, n. sp. (Pl. VIII., fig. 15).

Palpi, head, and fore part of thorax rich reddish ochreous; antennæ and fore wings chocolate-brown, covered with black atoms. Fore wing with two transverse dark brown straight bands or thick lines; ante-medial and discal, the latter duplex, caused by a dark brown sinuous line immediately beyond it; marginal points black. Hind wing blackish brown, tinged with pale chocolate, broadly blackish on the outer margin; cilia of both wings ochreous. Under side pale ochreous cinereous; fore wing with a blackish mark at end of cell, some central blackish suffusions, and blackish marginal space limited by the outer band; inner band obsolete. Hind wing with the mark at end of cell, slight blackish suffusion at marginal border, which has a discal band of blackish spots, and a sub-marginal band; both wings with black marginal lunular line; body and legs ochreous, tarsi brown. Expanse of wings,  $1\frac{3}{10}$  in.

Khandalla, September, 1888 (*Hewett*).

Allied to *P. luteiceps*, Walker; chiefly differs in the coloration, in having an outer straight band instead of an acutely retracted one, in the position of the sub-marginal band, and in the colour and markings below.

## CATEPHIDÆ.

31. *Gyrtona exsiccata*, n. sp. (Pl. VIII., fig. 5).

Palpi, antennæ, head, body, and fore wings brown; palpi whitish on the inner sides. Fore wings with four or five indistinct sinuous transverse blackish lines at equal distances from each other; the first visible is on the basal third, and has a deep black point on the hinder margin; the last is the most sinuous, and is submarginal, and this and the two preceding it are deep black, though very fine and more or less disjointed; the first of these has an elongated deep black spot near the hinder margin, and in the central part of the wing are two or three black points; marginal line brown; fringe brown, paler. Hind wings pale greyish, semi-hyaline, with a brown deep border, diffuse inwardly. Under side whitish, unmarked. Expanse of wings, 1 in.

North Kanara (*Wise*).

Is shaped like *G. hylusalis*, Walker, but differs in the markings of the fore wings, and the colour and band of the hind wings.

## HOMOPTERIDÆ.

32. *Alamis yendola*, n. sp.

♂ ♀. Antennæ, palpi, head, body, and wings pinkish grey; palpi with brown bands to the tips; both wings covered with many transverse brown sinuous lines and bands, forming on the fore wing a broad group of bands at the base and another in the middle, and a blackish patch angled downwards from the costa near the apex, and on the hind wing an indistinct discal band; both wings with a black submarginal festoon, and a pale marginal line; a brown cilia, with a black line at the base and a pale middle line. Under side much paler, with a number of sinuous transverse pale brown lines on both wings. Expanse of wings,  $1\frac{2}{3}$  in.

Poona, October, 1882; Karachi, September, 1886.

Allied to *Alamis infligens*, Walker, but uniformly smaller, the wings shorter, deeper, and more rounded, and the markings, though of the same nature, are altogether differently disposed.

## OPHIUSIDÆ.

33. *Athyryma intorta*, n. sp. (Pl. VIII., fig. 13).

♂. Palpi, head, fore part of thorax, and anal tuft ochreous; antennæ, body, and fore wings yellowish fawn-colour. Fore wing with a large distorted black patch, ringed with white at one-third from base, filling lower two-thirds of wing; on costa above is a brown mark; a discal white line from hinder margin beyond middle, sinuous, running upwards close to the inner patch, then distorted and curving much outwards, and running up to costa at one-fourth from apex; this line limits a black suffusion, which is suffused into the colour of the wing as it reaches the margin; an indistinct submarginal sinuous blackish line; marginal black spots. Hind wing blackish, darkest towards outer margin. Under side yellowish, a dot at end of each cell, some brown suffusions, especially on fore wings, a curved discal line across both wings, and brown marginal line. Expanse of wings,  $1\frac{2}{3}$  in.

Bombay, October, 1886.

Allied to *Athyryma semilugens*, Walker (*Hydrelia*) = *Baniana luteiceps*, Walker; chiefly differs in the presence of the inner patch on fore wings, in the narrower outer margin, and the absence of the inner line on fore wings.

## FOCILLIDÆ.

34. *Matella euphrona*, n. sp. (Pl. VIII., fig. 16).

Of a uniform yellowish fawn-colour; palpi whitish, flecked with black; wings irrorated and suffused with brown, with two large hyaline spots on the fore wing, one in the middle of the cell, nearly round, the other at the end larger and ear-shaped; a hyaline spot at the end of the cell in the hind wings; all the spots ringed with brown. Fore wings crossed by three transverse brown lines; ante-medial, medial and discal, curving outwardly, rather sinuous, the 1st and 2nd lines bending inwards on to the costa, the 1st inside the 1st spot, the 2nd outside the 2nd spot; a submarginal sinuous indistinct pale line. Hind wings with two lines, corresponding to the two outer lines of fore wings; a submarginal pale line; marginal line of both wings black; cilia interlined. Under side: wings marked as above, but with prominent dark blackish brown suffusions. Expanse of wings,  $\frac{9}{10}$  in.

Poona, October, 1887.

Allied to *M. accingalis*, Walker; is similarly coloured, but much smaller, the hyaline spots larger and the bands straighter and differently disposed, the outer one terminating at the anal angle instead of the outer third of abdominal margin; Walker's type is a female fragment I overlooked when describing *M. caduca* (P. Z. S., 1885, p. 470), but, having now a long series, I am convinced they are identical.

35. *Nagadeba mistura*, n. sp.

♂ ♀. Chocolate-grey; palpi with whitish inner sides and tips; abdomen with whitish segmental bands above. Fore wings crossed by seven or eight sinuous grey lines; costa with two white marks, 1st at one-third from base, 2nd at one-third from apex, where the costal border is depressed; in some specimens there is a whitish angular space here, which, with the naked eye, looks like a wing-fold; marginal line black, incomplete, prominently black below the apex, and there are some brown shades on the costal and central portions of the wing. Hind wing paler, crossed by three or four indistinct sinuous grey lines; black lunular marginal line; cilia of both wings interlined with black. Under side darkly suffused with black. Expanse of wings,  $\frac{6}{10}$ — $\frac{8}{10}$  in.

Poona, September and October, 1887.

Allied to nothing I know of.



## THERMESIIDÆ.

## PTEROGONIA, gen. nov.

Fore wing rather short, broad; costa rather straight to near the end, apex pointed; exterior margin angled below the apex and again at the middle, below which it is very oblique, the posterior margin being very convex. Hind wing short; apex very convex, exterior margin slightly convex. Body stout; thorax slightly crested in front; palpi erect, projecting slightly above the head; apex pointed; antennæ setaceous; legs thick, fore tibiæ stout, hind tibiæ with two pairs of spurs.

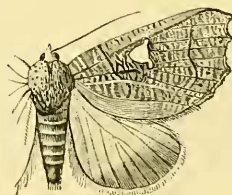
This genus is allied to *Doranaga*, Moore, Lep. Ceylon, iii., p. 553, and will include *Pterogonia* (*Doranaga*) *striatura*, Moore, l. c., p. 553, pl. 214, f. 11. The type of the genus *Doranaga* is *D. apicalas*, Moore, l. c., which is identical with *Doranaga* (*Ariolica*) *leucospila*, Walker, xxxiii., p. 788.

36. *Pterogonia episcopalis*, n. sp.

♂. Antennæ, palpi, thorax, and fore wings lilacine-grey; abdomen dusky; thorax and palpi with a few dark ferruginous speckles. Fore wings with numerous transverse broad ferruginous striæ clouding the wing, darkest obliquely from the costa near the base for two-thirds the area, a slender outwardly oblique transverse wavy line from the costa one-third from the base, a zigzag similar line one-fifth from the apex, beyond which are a few apical sub-marginal blackish striæ, and two or three black speckles towards the posterior angle; within the end of the cell is a large and very prominent silvery white mitre-shaped spot. Hind wing cinereous white, with a broad dusky marginal band; legs cinereous white, tarsi dusky, fore tibiæ ferruginous. Expanse of wings, 1 $\frac{5}{10}$  in.

Coonor, Nilgiri Hills (*Lindsay*); type-specimen in coll. Moore.

Somewhat resembles *Doranaga striatura*, Moore.



P. EPISCOPALIS.

37. *Capnodes cascalis*, n. sp. (Pl. VIII., fig. 6, ♂ ; 10, ♀).

♂ ♀. Brownish fawn-colour; palpi striped with pale yellowish and pale at the tips; thorax with a brown band in front; wings sparsely irrorated with brown atoms; an indistinct sinuous pale brown ante-medial transverse line on fore wings, orbicular and reniform very indistinct; a straight brown thin band across both wings, from the abdominal margin before the middle to near the costa of fore wings, where it joins a curved band enclosing a blackish space, suffused in parts with white; a discal row of brown points, outwardly edged with white, a submarginal row of black points very close to the margin, and a black marginal line. Under side paler, irrorated with brown atoms, indications of a faint discal band across both wings enclosing some brown points; submarginal black points, and marginal line as above; legs with tibiæ and tarsi brown above, with yellow bands. Expanse of wings,  $1\frac{3}{16}$  in.

Travancore (*Cotton*); Khandalla, September, 1883 (*Hewett*).

Distinguishable from *C. pallens*, Moore, by the straight band across both wings, and by the black and white space on the costa near apex.

#### HERMINIIDÆ.

38. *Oglasa costiplaga*.

*Oglasa costipannosa* (nom. prec.), Swinhoe, Trans. Ent. Soc. Lond., 1890, p. 266, n. 517.

Rangoon, Moulmein, and Bhamo.

The insect described by Mr. Moore as *Egnasia costipannosa*, Descr. Ind. Lep. Atk., ii., p. 184 (1882), is, I find on examination of the genus, *Oglasa*, and therefore it becomes necessary for me to adopt another name for my insect.

#### PYRALES.

##### HAPALIADÆ.

39. *Crocidophora griseifusa*, n. sp.

♂. Dull pearly iridescent grey. Fore wing with a broad dark band along outer margin, narrowing slightly towards outer angle; an indistinct dark band from the costa one-third from apex, bent inwards at the median vein, where it is joined by a band from the centre of costa, reaching the hinder margin at centre. Hind wing with a dark outer border, broad on apical half, narrow towards

anal angle; an indistinct dark band, erect, from centre of costa to the 2nd median veinlet, then curved round to inner margin above the anal angle; the raised sexual tuft of hairs on the under side of fore wing below the cell is very large and dark, and the median vein very much distorted, so as to pass round above it.

♀. Suffused with golden ochreous, the markings still more indistinct than in the male, the band on fore wing slightly waved, on hind wing more evenly curved. Expanse of wings, ♂  $1\frac{2}{10}$ , ♀  $1\frac{4}{10}$  in.

North Kanara, June, 1887 (*Wise*); Nilgiri Hills, southern slopes (*Lindsay*).

Is somewhat akin to the North American ochreous forms.

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#### EXPLANATION OF PLATE VIII.

- FIG. 1. *Syntomis magna*, n. sp., p. 133.  
 2. „ *mota*, n. sp., p. 134.  
 3. *Harpypia wisei*, ♀, n. sp., p. 139.  
 4. *Curubasa depicta*, ♀, n. sp., p. 146.  
 5. *Gyrtona cæcisa*, n. sp., p. 149.  
 6. *Capnodes cascalis*, ♂, n. sp., p. 153.  
 7. *Syntomis lydia*, ♂, n. sp., p. 134.  
 8. *Alpenus eximia*, n. sp., p. 137.  
 9. *Ræselia culaca*, ♂, n. sp., p. 137.  
 10. *Capnodes cascalis*, ♀, n. sp., p. 153.  
 11. *Hypochrosis intexta*, ♂, n. sp., p. 145.  
 12. *Tascia gana*, n. sp., p. 133.  
 13. *Athyrra intorta*, n. sp., p. 150.  
 14. *Hyela senna*, n. sp., p. 148.  
 15. *Poaphila erica*, n. sp., p. 149.  
 16. *Matella euphrona*, n. sp., p. 151.